

FILE 'REGISTRY' ENTERED AT 14:43:44 ON 17 OCT 2007
L1 STRUCTURE UPLOADED
L2 9894 S L1
L3 2 S L1
L4 20 S L1 SSS FULL

FILE 'CAPLUS' ENTERED AT 14:44:44 ON 17 OCT 2007
L5 35 S L4

FILE 'STNGUIDE' ENTERED AT 14:44:52 ON 17 OCT 2007

FILE 'HCAPLUS' ENTERED AT 14:47:13 ON 17 OCT 2007
L6 51792 S FLUORINAT?
L7 909995 S (SACCHARIDE OR MONOSACCHARIDE OR NUCLEOSIDE OR RIBOS? OR GLUC
L8 25 S L5 AND L6
L9 2 S L5 AND L6 AND L7

FILE 'STNGUIDE' ENTERED AT 14:47:19 ON 17 OCT 2007

FILE 'HCAPLUS' ENTERED AT 14:47:41 ON 17 OCT 2007

FILE 'STNGUIDE' ENTERED AT 14:47:41 ON 17 OCT 2007

FILE 'HCAPLUS' ENTERED AT 14:49:18 ON 17 OCT 2007
L10 12 S L8 AND (AY<2003 OR PY<2003 OR PRY<2003)

=> file registry
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 14:43:44 ON 17 OCT 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2007 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 16 OCT 2007 HIGHEST RN 950817-67-1
DICTIONARY FILE UPDATES: 16 OCT 2007 HIGHEST RN 950817-67-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

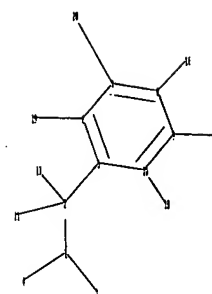
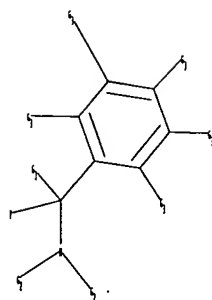
TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>
Uploading C:\Program Files\Stnexp\Queries\10537437afterfinal.str



```

chain nodes :
1  2  3  4  11  13  16  17  18  19  20
ring nodes :
5  6  7  8  9  10
chain bonds :
1-2  1-3  1-4  2-5  2-11  2-13  6-19  7-20  8-16  9-17  10-18
ring bonds :
5-6  5-10  6-7  7-8  8-9  9-10
exact/norm bonds :
1-2  1-3  1-4  2-13  6-19  7-20  8-16  9-17  10-18
exact bonds :
2-5  2-11
normalized bonds :
5-6  5-10  6-7  7-8  8-9  9-10

```

G1:H,Cl,Br,F,I

G2:CH3,CH2,n-Pr,i-Pr,n-Bu,i-Bu,s-Bu,t-Bu,Ph,H

G3:H,CH3,Et,Cl,Br,F,I,MeO,NH2,NH3,NO2

Match level :

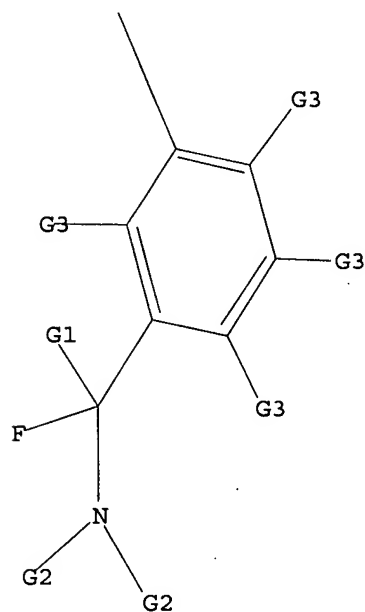
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:CLASS 13:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS

L1 STRUCTURE UPLOADED

=> d 'l1

L1 HAS NO ANSWERS

L1 STR



G1 H,Cl,Br,F,I

G2 Me,CH2,n-Pr,i-Pr,n-Bu,i-Bu,s-Bu,t-Bu,Ph,H

G3 H,Me,Et,Cl,Br,F,I,MeO,NH2,NH3,NO2

Structure attributes must be viewed using STN Express query preparation.

=> s l1`

L2 9894 L1`
('L1')

=> s l1

SAMPLE SEARCH INITIATED 14:44:10 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 379 TO ITERATE

100.0% PROCESSED 379 ITERATIONS

2 ANSWERS

SEARCH TIME: 00.00.01

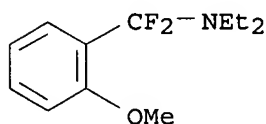
FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 6412 TO 8748
PROJECTED ANSWERS: 2 TO 124

L3 2 SEA SSS 'SAM L1

=> d l3 scan

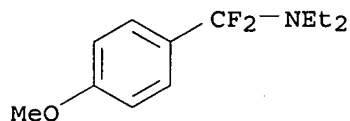
L3 2 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Benzenemethanamine, N,N-diethyl- α,α -difluoro-2-methoxy-
MF C12 H17 F2 N O



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 2 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Benzenemethanamine, N,N-diethyl- α,α -difluoro-4-methoxy-
MF C12 H17 F2 N O



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s l1 sss full
FULL SEARCH INITIATED 14:44:39 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 7929 TO ITERATE

100.0% PROCESSED 7929 ITERATIONS
SEARCH TIME: 00.00.01

20 ANSWERS

L4 20 SEA SSS FUL L1

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	177.50	177.71

FILE 'CAPLUS' ENTERED AT 14:44:44 ON 17 OCT 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 17 Oct 2007 VOL 147 ISS 17
FILE LAST UPDATED: 16 Oct 2007 (20071016/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> s l4

L5 35 L4

=> file stnguide

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.47

178.18

FILE 'STNGUIDE' ENTERED AT 14:44:52 ON 17 OCT 2007
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Oct 12, 2007 (20071012/UP).

=> file hcaplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.24

178.42

FILE 'HCAPLUS' ENTERED AT 14:47:13 ON 17 OCT 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 17 Oct 2007 VOL 147 ISS 17
FILE LAST UPDATED: 16 Oct 2007 (20071016/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s fluorinat?

L6 51792 FLUORINAT?

=> s (saccharide or monosaccharide or nucleoside or ribos? or glucos? or fructos?
or arabons? or fucos? or (N-acetylglucosamin?) or (N-acetylgalactosamin?) or sugar)

10271 SACCHARIDE
11905 MONOSACCHARIDE
48930 NUCLEOSIDE
120294 RIBOS?
514419 GLUCOS?
70340 FRUCTOS?
0 ARABONS?
19142 FUCOS?
3094512 N
18895 ACETYLGLUCOSAMIN?
16088 N-ACETYLGLUCOSAMIN?
(N(W)ACETYLGLUCOSAMIN?)
3094512 N
6208 ACETYL GALACTOSAMIN?
5570 N-ACETYL GALACTOSAMIN?
(N(W)ACETYL GALACTOSAMIN?)
268138 SUGAR

L7 909995 (SACCHARIDE OR MONOSACCHARIDE OR NUCLEOSIDE OR RIBOS? OR GLUCOS?
OR FRUCTOS? OR ARABONS? OR FUCOS? OR (N-ACETYLGLUCOSAMIN?) OR
(N-ACETYL GALACTOSAMIN?) OR SUGAR)

=> s 15 and 16

35 L4
L8 25 L5 AND L6

=> s 15 and 16 and 17

35 L4
L9 2 L5 AND L6 AND L7

=> file stnguide

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.60	181.02

FILE 'STNGUIDE' ENTERED AT 14:47:19 ON 17 OCT 2007
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Oct 12, 2007 (20071012/UP).

=> d 19 1-2 ti abs bib
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L9 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN
TI Deoxyfluorination of alcohols using N,N-diethyl- α,α -difluoro-
(m-methylbenzyl)amine
AB Deoxyfluorination of alcs. was carried out using N,N-diethyl-
 α,α -difluoro-(m-methylbenzyl)amine (DFMBA). Primary alcs.
were effectively converted to fluorides under microwave irradiation or
conventional heating. Deoxyfluorination of an anomeric hydroxy group in
sugars by DFMBA proceeded at below room temperature and glycosyl fluorides
could be obtained in good yields. The deoxyfluorination reaction

chemoselectively proceeded and various protecting groups on the sugar can survive under the reaction conditions.

AN 2004:581849 HCAPLUS <<LOGINID::20071017>>
DN 141:260951
TI Deoxyfluorination of alcohols using N,N-diethyl- α,α -difluoro-(m-methylbenzyl)amine
AU Kobayashi, Shingo; Yoneda, Atushi; Fukuhara, Tsuyoshi; Hara, Shoji
CS Division of Molecular Chemistry, Graduate School of Engineering, Hokkaido University, Sapporo, 060-8628, Japan
SO Tetrahedron (2004), 60(32), 6923-6930
CODEN: TETRAB; ISSN: 0040-4020
PB Elsevier Science B.V.
DT Journal
LA English
OS CASREACT 141:260951
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN
TI Method of fluorination using N,N-diethyl- α,α -difluorobenzylamines
AB Disclosed is a method in which a glucide, examples of which include a monosaccharide, an oligosaccharide, a polysaccharide, a composite saccharide comprising any of these saccharides and a protein or lipid bonded thereto, a polyalc., an aldehyde, ketone, or acid of a polyalc., a derivative or condensate of any of these, is reacted with a fluorinating agent represented by the general formula of RCF₂-Y(R₁)R₂ [y = N, P; R-R₂ are same or different group selected from H and each (un)substituted alkyl and aryl; or ≥ 2 of R-R₂ groups are bonded to each other to form a ring] either thermally or by irradiation with microwave or an electromagnetic wave with a wavelength around the microwave region. By the method, fluorination reaction can be safely conducted position-selectively even in a temperature range of 150 to 200°, in which fluorination has conventionally been difficult. The method in which the reactants are irradiated with microwave or an electromagnetic wave with a wavelength around the microwave region is applicable to substrates other than glucides. When a complex compound comprising HF and a base, for example, is reacted with a substrate by irradiation with microwave, fluorination in a specific position which has been difficult in conventional techniques proceeds highly selectively in a short time efficiently and safely. Thus, 10 mmol Me 2,3-O-isopropylidene- β -D-ribofuranoside, 12 mmol N,N-diethyl- α,α -difluoro-3-methylbenzylamine, and 20 mL heptane were added to a glass vessel reaction vessel coated with fluorinated resin, heated with 100° with stirring, and allowed to react for 50 min to give 55% Me 2,3-O-isopropylidene-5-deoxy-5-fluoro- β -D-ribofuranoside.

AN 2004:493719 HCAPLUS <<LOGINID::20071017>>
DN 141:38808
TI Method of fluorination using N,N-diethyl- α,α -difluorobenzylamines
IN Hara, Shoji; Fukuhara, Tsuyoshi
PA Mitsubishi Gas Chemical Company, Inc., Japan
SO PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	WO 2004050676	A1	20040617	WO 2003-JP15336	20031201
	W: CN, US				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				

JP 2004182664	A	20040702	JP 2002-352968	20021204
JP 2004189655	A	20040708	JP 2002-358249	20021210
EP 1568703	A1	20050831	EP 2003-775984	20031201
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
CN 1720256	A	20060111	CN 2003-80104679	20031201
CN 1974588	A	20070606	CN 2006-10164022	20031201
US 2006014972	A1	20060119	US 2005-537437	20050603
PRAI JP 2002-352968	A	20021204		
JP 2002-358249	A	20021210		
CN 2003-80104679	A3	20031201		
WO 2003-JP15336	W	20031201		
OS CASREACT 141:38808; MARPAT 141:38808				
RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD				
ALL CITATIONS AVAILABLE IN THE RE FORMAT				

=> file hcaplus

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.18	189.52
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-1.56

FILE 'HCAPLUS' ENTERED AT 14:49:18 ON 17 OCT 2007
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 17 Oct 2007 VOL 147 ISS 17
 FILE LAST UPDATED: 16 Oct 2007 (20071016/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 18 and (AY<2003 or PY<2003 or PRY<2003)

4465265 AY<2003
 22908103 PY<2003
 3944043 PRY<2003

L10 12 L8 AND (AY<2003 OR PY<2003 OR PRY<2003)

=> file stnguide

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	2.60	192.12
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL

CA SUBSCRIBER PRICE ENTRY SESSION
0.00 -1.56

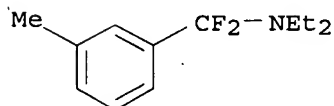
FILE 'STNGUIDE' ENTERED AT 14:49:22 ON 17 OCT 2007
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Oct 12, 2007 (20071012/UP).

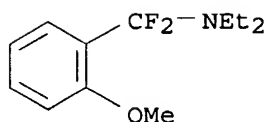
=> d l10 1-12 ti abs bib hitstr
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L10 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
TI Preparation of fluorinated alicyclic compounds using
difluoroamines as thermally stable safe fluorination agents
AB In title process, R0CF2NR1R2 [R0-R2 = H, (un)substituted alkyl, aryl;
≥2 of them may be linked to form ring] are used. Thus, Me
3-hydroxyadamantane-1-carboxylate was fluorinated with
3-MeC6H4CF2Net2 at room temperature for 14 h to give 98% Me
3-fluoroadamantane-1-
carboxylate.
AN 2004:529739 HCAPLUS <<LOGINID::20071017>>
DN 141:88875
TI Preparation of fluorinated alicyclic compounds using
difluoroamines as thermally stable safe fluorination agents
IN Kawai, Ken; Fushimi, Norio; Hidaka, Toshio
PA Mitsubishi Gas Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI JP 2004182671 A 20040702 JP 2002-353469 20021205 <--
PRAI JP 2002-353469 20021205 <--
OS MARPAT 141:88875
IT 500131-50-0P, N,N-Diethyl-α,α-difluoro-(3-
methyl)benzylamine 704916-04-1P, N,N-Diethyl-α,α-
difluoro-(2-methoxy)benzylamine
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(fluorination of alicyclic compds. with thermally stable safe
difluoroamines)
RN 500131-50-0 HCAPLUS
CN Benzenemethanamine, N,N-diethyl-α,α-difluoro-3-methyl- (CA
INDEX NAME)



RN 704916-04-1 HCAPLUS
CN Benzenemethanamine, N,N-diethyl-α,α-difluoro-2-methoxy- (CA
INDEX NAME)



L10 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
 TI Preparation of thermally stable fluorination agents and
 fluorination of functional group-containing compounds with them
 AB Substrates are fluorinated with R₀CF₂NR₁R₂ [R₀-R₂ = H,
 (un)substituted alkyl, aryl; ≥2 of them may be linked to form
 ring]. Thus, fluorination of N,N-diethyl-α-chloro-(2-
 methoxyphenyl)amidium chloride with KF at 80° for 20 h gave 55%
 2-MeOC₆H₄CF₂NEt₂, with which 1-adamantanol was fluorinated at
 60° for 14 h to afford 86% 1-fluoroadamantane.

AN 2004:529733 HCAPLUS <<LOGINID::20071017>>

DN 141:53982

TI Preparation of thermally stable fluorination agents and
 fluorination of functional group-containing compounds with them

IN Yamada, Kazuhiro; Hidaka, Toshio

PA Mitsubishi Gas Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

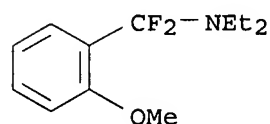
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004182665	A	20040702	JP 2002-353010	20021204 <--
PRAI	JP 2002-353010		20021204	<--	
OS	MARPAT 141:53982				
IT	704916-04-1P				
	RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (fluorination of functional group-containing compds. with thermally stable difluoroamines)				
RN	704916-04-1 HCAPLUS				
CN	Benzenemethanamine, N,N-diethyl-α,α-difluoro-2-methoxy- (CA INDEX NAME)				



L10 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN

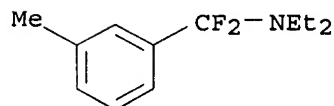
TI Method of fluorination using N,N-diethyl-α,α-
 difluorobenzylamines

AB Disclosed is a method in which a glucide, examples of which include a
 monosaccharide, an oligosaccharide, a polysaccharide, a composite
 saccharide comprising any of these saccharides and a protein or lipid
 bonded thereto, a polyalc., an aldehyde, ketone, or acid of a polyalc., a
 derivative or condensate of any of these, is reacted with a
 fluorinating agent represented by the general formula of
 RCF₂-Y(R₁)R₂ [y = N, P; R-R₂ are same or different group selected from H
 and each (un)substituted alkyl and aryl; or ≥2 of R-R₂ groups are
 bonded to each other to form a ring] either thermally or by irradiation with
 microwave or an electromagnetic wave with a wavelength around the

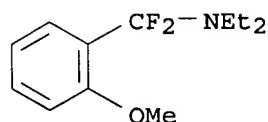
microwave region. By the method, fluorination reaction can be safely conducted position-selectively even in a temperature range of 150 to 200°, in which fluorination has conventionally been difficult. The method in which the reactants are irradiated with microwave or an electromagnetic wave with a wavelength around the microwave region is applicable to substrates other than glucides. When a complex compound comprising HF and a base, for example, is reacted with a substrate by irradiation with microwave, fluorination in a specific position which has been difficult in conventional techniques proceeds highly selectively in a short time efficiently and safely. Thus, 10 mmol Me 2,3-O-isopropylidene-β-D-ribofuranoside, 12 mmol N,N-diethyl-α,α-difluoro-3-methylbenzylamine, and 20 mL heptane were added to a glass vessel reaction vessel coated with fluorinated resin, heated with 100° with stirring, and allowed to react for 50 min to give 55% Me 2,3-O-isopropylidene-5-deoxy-5-fluoro-β-D-ribofuranoside.

AN 2004:493719 HCAPLUS <<LOGINID::20071017>>
 DN 141:38808
 TI Method of fluorination using N,N-diethyl-α,α-difluorobenzylamines
 IN Hara, Shoji; Fukuhara, Tsuyoshi
 PA Mitsubishi Gas Chemical Company, Inc., Japan
 SO PCT Int. Appl., 50 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004050676	A1	20040617	WO 2003-JP15336	20031201 <--
	W: CN, US				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
	JP 2004182664	A	20040702	JP 2002-352968	20021204 <--
	JP 2004189655	A	20040708	JP 2002-358249	20021210 <--
	EP 1568703	A1	20050831	EP 2003-775984	20031201 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
	CN 1720256	A	20060111	CN 2003-80104679	20031201 <--
	CN 1974588	A	20070606	CN 2006-10164022	20031201 <--
	US 2006014972	A1	20060119	US 2005-537437	20050603 <--
PRAI	JP 2002-352968	A	20021204	<--	
	JP 2002-358249	A	20021210	<--	
	CN 2003-80104679	A3	20031201		
	WO 2003-JP15336	W	20031201		
OS	CASREACT 141:38808; MARPAT 141:38808				
IT	500131-50-0P, N,N-Diethyl-α,α-difluoro-3-methylbenzylamine 704916-04-1P, N,N-Diethyl-α,α-difluoro-2-methoxybenzylamine				
	RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)				
	(fluorination agent; preparation of N,N-diethyl-α,α-difluorobenzylamines as fluorinating agents for monosaccharides, alcs., ketones, epoxides, and aldehydes)				
RN	500131-50-0 HCAPLUS				
CN	Benzenemethanamine, N,N-diethyl-α,α-difluoro-3-methyl- (CA INDEX NAME)				



RN 704916-04-1 HCAPLUS
 CN Benzenemethanamine, N,N-diethyl- α,α -difluoro-2-methoxy- (CA
 INDEX NAME)

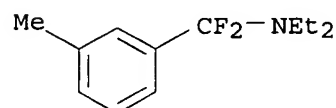


RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
 TI Fluorination under microwave irradiation
 AB Substrates are fluorinated by fluoro compds. under
 (near-)microwave irradiation 1-Dodecanol was fluorinated by
 N,N-diethyl- α,α -difluoro-3-methylbenzylamine under microwave
 irradiation at room temperature for 10 min to give 93% 1-fluorododecane.
 AN 2004:330166 HCAPLUS <<LOGINID::20071017>>
 DN 140:338752
 TI Fluorination under microwave irradiation
 IN Hara, Masaharu; Fukuhara, Katashi
 PA Mitsubishi Gas Chemical Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004123605	A	20040422	JP 2002-290198	20021002 <--
PRAI	JP 2002-290198		20021002	<--	
OS	CASREACT 140:338752; MARPAT 140:338752				
IT	500131-50-0				
	RL: RCT (Reactant); RACT (Reactant or reagent) (fluorination of organic compds. by fluoro amines under microwave irradiation)				
RN	500131-50-0 HCAPLUS				
CN	Benzenemethanamine, N,N-diethyl- α,α -difluoro-3-methyl- (CA INDEX NAME)				

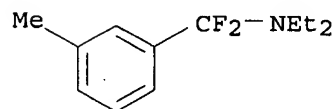


L10 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
 TI Preparation of heat-stable fluorine compounds, fluorination
 agents thereof, and surface treatment agents, cleaning solvents, and
 coatings containing them
 AB R0CF2XR1R2 [X = N, P; R0, R1, R2 = H, (un)substituted alkyl, aryl; R0, R1,
 R2 may be linked to form ring] are prepared Also claimed are R0CY:X+R1R2 Y-
 (X, R0-R2 = same as above; Y = Cl, Br, I) as the intermediates of the F
 compds. Thus, 3-MeC6H4CCl:N+Et2 Cl- was refluxed with KF in MeCN for 18 h
 to give .apprx.60% 3-MeC6H4CF2NEt2, which was stable when heated at
 200° for 1 h in a sealed tube. Fluorination of PhCH2OH

with 3-MeC6H4CF2NEt2 gave 100% PhCH2F.

AN 2003:165059 HCAPLUS <<LOGINID::20071017>>
 DN 138:204826
 TI Preparation of heat-stable fluorine compounds, fluorination
 agents thereof, and surface treatment agents, cleaning solvents, and
 coatings containing them
 IN Hidaka, Toshio; Fushimi, Norio; Yoshimura, Takashi; Kawai, Takeshi
 PA Mitsubishi Gas Chemical Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003064034	A	20030305	JP 2001-257833	20010828 <--
	WO 2003020685	A1	20030313	WO 2002-JP8477	20020822 <--
	W: US				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR				
	EP 1422216	A1	20040526	EP 2002-760710	20020822 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR, BG, CZ, EE, SK				
	US 2004073065	A1	20040415	US 2003-433412	20030604 <--
	US 7019173	B2	20060328		
	US 2006089513	A1	20060427	US 2005-297408	20051209 <--
PRAI	JP 2001-257833	A	20010828 <--		
	WO 2002-JP8477	W	20020822 <--		
	US 2003-433412	A3	20030604		
OS	CASREACT 138:204826; MARPAT 138:204826				
IT	500131-50-0P				
	RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (fluorination agent; preparation of heat-stable F compds. via amidium halides for fluorination agents, surface treatment agents, cleaning solvents, and coatings)				
RN	500131-50-0 HCAPLUS				
CN	Benzenemethanamine, N,N-diethyl- α,α -difluoro-3-methyl- (CA INDEX NAME)				



L10 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
 TI Fluorination of thiocarbonyl compounds with bis(2-
 methoxyethyl)aminosulfur trifluoride (Deoxo-Fluor reagent): a facile
 synthesis of gem-difluorides
 AB A variety of thiocarbonyl derivs. (thioketone, thioester, thioamide,
 dithioester, and dithiocarbamate) were converted to the corresponding
 gem-difluorides in excellent yields on reaction with the
 fluorinating agent, bis(2-methoxyethyl)aminosulfur trifluoride
 (I), in the presence of SbCl3. Thus, reacting PhC(S)Ph with I gave
 PhCF2Ph in 89% yield.
 AN 2000:463617 HCAPLUS <<LOGINID::20071017>>
 DN 133:192747
 TI Fluorination of thiocarbonyl compounds with bis(2-
 methoxyethyl)aminosulfur trifluoride (Deoxo-Fluor reagent): a facile

synthesis of gem-difluorides
 AU Lal, Gauri S.; Lobach, Elyse; Evans, Ann
 CS Air Products and Chemicals Inc., Allentown, PA, 18195-1501, USA
 SO Journal of Organic Chemistry (2000), 65(16), 4830-4832
 CODEN: JOCEAH; ISSN: 0022-3263
 PB American Chemical Society
 DT Journal
 LA English
 OS CASREACT 133:192747
 IT 702-99-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of gem-difluorides by fluorination of thiocarbonyl
 compds. with Deoxo-Fluor reagent)
 RN 702-99-8 HCAPLUS
 CN Benzenemethanamine, α,α -difluoro-N,N-dimethyl- (CA INDEX
 NAME)

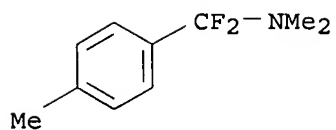
Ph-CF₂-NMe₂

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

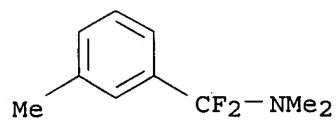
L10 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
 TI Reactions of N,N-dialkylbenzamides with sulfur tetrafluoride. Formation
 of dialkyl- α,α -difluorobenzylamines
 AB The KF-catalyzed reaction of amides R₂NCOC₆H₄R₁ (I; R = Me, Et, Pr,
 CH₂CH₂CF₃; R₁ = H, Me, OMe, Br, CF₃, NO₂) with SF₄ gave amines
 R₂NCF₂C₆H₄R₁. Substituent effects of the R₁ in I (R = Me) is discussed.
 AN 1984:209316 HCAPLUS <<LOGINID::20071017>>
 DN 100:209316
 TI Reactions of N,N-dialkylbenzamides with sulfur tetrafluoride. Formation
 of dialkyl- α,α -difluorobenzylamines
 AU Dmowski, Wojciech; Kaminski, Maciej
 CS Inst. Org. Chem., Pol. Acad. Sci., Warsaw, 01224, Pol.
 SO Polish Journal of Chemistry (1982), 56(10-12), 1369-78
 CODEN: PJCHDQ; ISSN: 0137-5083
 DT Journal
 LA English
 OS CASREACT 100:209316.
 IT 702-99-8P 90238-11-2P 90238-12-3P
 90238-13-4P 90238-14-5P 90238-15-6P
 90238-18-9P 90238-20-3P 90238-21-4P
 90238-22-5P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 702-99-8 HCAPLUS
 CN Benzenemethanamine, α,α -difluoro-N,N-dimethyl- (CA INDEX
 NAME)

Ph-CF₂-NMe₂

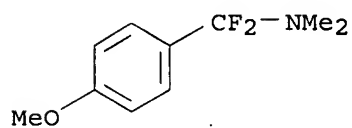
RN 90238-11-2 HCAPLUS
 CN Benzenemethanamine, α,α -difluoro-N,N,4-trimethyl- (9CI) (CA
 INDEX NAME)



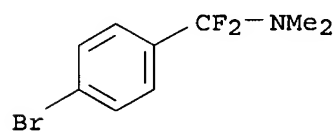
RN 90238-12-3 HCAPLUS
 CN Benzenemethanamine, α,α -difluoro-N,N,3-trimethyl- (9CI) (CA INDEX NAME)



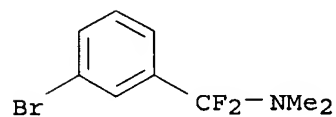
RN 90238-13-4 HCAPLUS
 CN Benzenemethanamine, α,α -difluoro-4-methoxy-N,N-dimethyl- (9CI) (CA INDEX NAME)



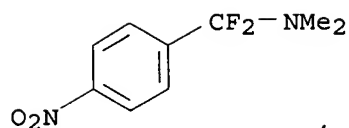
RN 90238-14-5 HCAPLUS
 CN Benzenemethanamine, 4-bromo- α,α -difluoro-N,N-dimethyl- (9CI) (CA INDEX NAME)



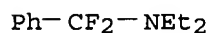
RN 90238-15-6 HCAPLUS
 CN Benzenemethanamine, 3-bromo- α,α -difluoro-N,N-dimethyl- (9CI) (CA INDEX NAME)



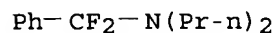
RN 90238-18-9 HCAPLUS
 CN Benzenemethanamine, α,α -difluoro-N,N-dimethyl-4-nitro- (9CI) (CA INDEX NAME)



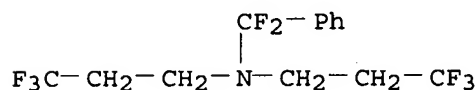
RN 90238-20-3 HCAPLUS
 CN Benzenemethanamine, N,N-diethyl- α,α -difluoro- (9CI) (CA INDEX NAME)



RN 90238-21-4 HCAPLUS
 CN Benzenemethanamine, α,α -difluoro-N,N-dipropyl- (9CI) (CA INDEX NAME)



RN 90238-22-5 HCAPLUS
 CN Benzenemethanamine, α,α -difluoro-N,N-bis(3,3,3-trifluoropropyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
 TI Dialkyl- α,α -difluorobenzylamines and
 dialkyl(trifluoromethyl)amines - novel fluorinating reagents
 AB The use of PhCF₂NMe₂ and CF₃Net₂ as fluorinating reagents to
 replace OH groups in alcs. and carboxylic acids by F has been studied.
 The results, which are very variable, are compared with those reported for
 other fluoroamine reagents.
 AN 1984:34109 HCAPLUS <<LOGINID::20071017>>
 DN 100:34109
 TI Dialkyl- α,α -difluorobenzylamines and
 dialkyl(trifluoromethyl)amines - novel fluorinating reagents
 AU Dmowski, Wojciech; Kaminski, Maciej
 CS Inst. Org. Chem., Pol. Acad. Sci., Warsaw, 00-961, Pol.
 SO Journal of Fluorine Chemistry (1983), 23(3), 219-28
 CODEN: JFLCAR; ISSN: 0022-1139
 DT Journal
 LA English
 OS CASREACT 100:34109
 IT 702-99-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (fluorination of alcs. and carboxylic acids by)
 RN 702-99-8 HCAPLUS
 CN Benzenemethanamine, α,α -difluoro-N,N-dimethyl- (CA INDEX NAME)

Ph-CF₂-NMe₂

L10 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
TI Synthetic methods and reactions. I. Selenium tetrafluoride and its pyridine complex. Convenient fluorinating agents for fluorination of ketones, aldehydes, amides, alcohols, carboxylic acids, and anhydrides
AB Selenium tetrafluoride is a general purpose, convenient fluorinating agent for a wide variety of compds., such as ketones, aldehydes, amides, alcs., carboxylic acids, and anhydrides. Addition of pyridine, which forms a complex with SeF₄, in fluorination of alcs. generally prevents isomerization and allows preparation of primary fluorides.
AN 1974:81959 HCAPLUS <<LOGINID::20071017>>
DN 80:81959
TI Synthetic methods and reactions. I. Selenium tetrafluoride and its pyridine complex. Convenient fluorinating agents for fluorination of ketones, aldehydes, amides, alcohols, carboxylic acids, and anhydrides
AU Olah, George A.; Nojima, Masatomo; Kerekes, Istvan
CS Dep. Chem., Case West. Reserve Univ., Cleveland, OH, USA
SO Journal of the American Chemical Society (1974), 96(3), 925-7
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English
IT 702-99-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 702-99-8 HCAPLUS
CN Benzenemethanamine, α,α -difluoro-N,N-dimethyl- (CA INDEX NAME)

Ph-CF₂-NMe₂

L10 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
TI Chemistry of carbonyl fluoride. I. Fluorination of organic compounds
AB Carbonyl fluoride reacts with carbonyl compds. such as cyclohexanone, benzaldehyde, and benzophenone to give the gem-difluorides, while HCONMe₂ yields α,α -difluorotrimethylamine. Metal fluoride-catalyzed addition at the ethylenic bond in perfluoro olefins forms perfluoroacyl fluorides, while the C-N unsatd. compds. CF₃N: CF₂, PhNCO, and CF₃CN give, resp., (CF₃)₂NCOF, PhN(COF)₂, and CF₃CF₂NCO. The exptl. technique, infrared and nuclear magnetic resonance spectra are given.
AN 1963:66175 HCAPLUS <<LOGINID::20071017>>
DN 58:66175
OREF 58:11243a-b
TI Chemistry of carbonyl fluoride. I. Fluorination of organic compounds
AU Fawcett, F. S.; Tullock, C. W.; Coffman, D. D.
CS E. I. du Pont de Nemours Co., Wilmington, DE
SO Journal of the American Chemical Society (1962), 84, 4275-85
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA Unavailable
OS CASREACT 58:66175
IT 702-99-8P, Benzylamine, α,α -difluoro-N,N-dimethyl-

RL: PREP (Preparation)
(preparation of)
RN 702-99-8 HCAPLUS
CN Benzenemethanamine, α,α -difluoro-N,N-dimethyl- (CA INDEX
NAME)

Ph-CF₂-NMe₂

L10 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
TI Fluorinated organic compounds
AB The title compds. can be used as chemical intermediates. Cyclohexanone 40, COF₂ 65, and HCONMe₂ 4-5 parts are placed in a reactor containing N, the reactor is closed, the mixture heated at 50° 12 hrs. under autogenous pressure, cooled, the volatile materials are removed, and the remaining liquid is distilled to give 1-fluorocyclohexyl fluoroformate (I), b₂₇ 59-63°, 52 parts. I 17, hexane 30-5, and BF₃-etherate 4.8 parts are heated at 45-7° 3 hrs., the mixture is cooled, the upper phase separated, agitated with powdered NaF, the NaF filtered off, the filtrate evaporated, and the residue distilled through a fractionating column to give 1,1-di-fluorocyclohexane, b. 101-7°, n_{25D} 1.3900-1.3895, 5.6 parts. Similarly prepared are Ph₂CF₂, b₁₅ 100-1°, n_{25D} 1.5360-1.5368; PhCHF₂, b₁₅ 35-6°; 4-Me₂NC₆H₄CHF₂; (FCH₂)₂O; PhCF₃ and BzF; F₃C(CF₂)₂COF; F₃C(CF₂)₆COF, b. 108-9°; FOC(CF₂)₃COF, b. 47-9°; FOC(CF₂)₂COF, b. 30-5°; 2-F₃CC₆H₄COF and phthaloyl fluoride; Me(F₂CH)NCOF and Me(HCO)NCOF; Me(MeCF₂)NCOF, b. 97-100° and MeAcNCOF, b. 136-8°; F₂CHNMe₂, b. 47-51.5°; PhCF₂NMe₂, b. 63°; N-fluoroformyl-1,1-difluorohexamethyleneimine, b₀₋₅ 50°; and Me₂NCF₂NMe₂, b. 101-3°.
AN 1963:39841 HCAPLUS <<LOGINID::20071017>>
DN 58:39841
OREF 58:6752d-f
TI Fluorinated organic compounds
PA E. I. du Pont de Nemours & Co.
SO 11 pp.
DT Patent
LA Unavailable
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI GB 909364 19621031 GB 1960-38526 19601109 <--
US 3213062 19651019 US 1959-852939 19591116 <--
PRAI US 19591116 <--
IT 702-99-8P, Benzylamine, α,α -difluoro-N,N-dimethyl-
RL: PREP (Preparation)
(preparation of)
RN 702-99-8 HCAPLUS
CN Benzenemethanamine, α,α -difluoro-N,N-dimethyl- (CA INDEX
NAME)

Ph-CF₂-NMe₂

L10 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN
TI The chemistry of sulfur tetrafluoride. II. The fluorination of organic carbonyl compounds
GI For diagram(s), see printed CA Issue.

AB cf. CA 54, 12862h. In many types of organic compds., the selective replacement of O atoms by F can be accomplished with SF₄. The replacement reactions are performed by cooling the liquid or solid organic compound containing

O in a Hastelloy-lined vessel under N to -78°, removing the N in vacuo, charging the vessel with the gaseous reactants (HF, BF₃, SF₄, etc.), heating the sealed vessel for the prescribed period, cooling, venting, and working up by the usual processes of distillation, recrystn., and sublimation (starting material, moles, moles SF₄, reaction temperature, reaction

time in hrs., product, % yield, and b.p. given): Et-CO₂H, 0.60, 1.82, 150°, 8, EtCF₃ (scrubbed with 40% aqueous KOH), 89, -; C₆H₁₃CO₂H, 0.20, 0.65, 130°, 6, C₆H₁₃CF₃, 80, 101° (n₂₅D 1.3449); C₁₁H₂₃CO₂H, 0.33, 2.00, 130°, 6, C₁₁H₂₃CF₃, 88, 92°/12 mm. (n₂₅D 1.3896); C₁₇H₃₅CO₂H, 0.35, 2.13, 130°, 6, C₁₇H₃₅CF₃, 93, 107°/3 mm. (m 28-30°, n₂₅D 1.4148); Me₃CCH₂CHMeCH₂CO₂H, 0.19, 0.57, 120°, 6, Me₃CCH₂CHMeCH₂CF₃, 64, 121-2° (n₂₅D 1.3657); 4-cyclohexylbutyric acid, 0.20, 0.60, 120°, 10, 1,1,1-trifluoro-4-cyclohexylbutane, 80, 172-3° (n₂₅D 1.3987); CH₂(CO₂H)₂, 0.30, 0.69, 40°, 16, CH₂(COF)₂, 70, 92-4°; CH₂(CO₂H)₂, 0.40, 2.40, 150°, 8, CH₂(CF₃)₂ (scrubbed with 40% aqueous KOH), 57, -; (CH₂CO₂H)₂, 0.40, 2.40, 150°, 8, (CH₂CF₃)₂ (scrubbed with 40% aqueous KOH), 41, -; (CH₂CH₂CO₂H)₂, 0.67, 2.23, 130°, 7, CF₃(CH₂)₄CF₃, 19, 99-101° (n₂₅D 1.3519) [and 39% CF₃(CH₂)₄CO₂H, m. 36-8°]; HO₂C(CH₂)₈CO₂H, 0.15, 0.46, 120°, 6, CF₃(CH₂)₈CF₃, 27, 90-6°/20 (n₂₅D 1.3519) [and CF₃(CH₂)₈COF, 45%, b₂₀ 115-18°, and FOC(CH₂)₈COF, 21%, b₂₀ 144-6°]; HO₂CCH₂CH(CO₂H)CH₂CO₂H, 0.07, 0.63, 130°, 10, O.CF₂.CH₂.C-(CF₃).CH₂.CF₂, 20, 104-6°; BrCH₂CHBrCH₂CO₂H, 0.53, 1.85, 140°, 8, BrCH₂CHBrCH₂CF₃, 54, 69-75°/58 mm.; F₂CHCF₂CO₂H, 0.15, 0.48 (and 0.03 mole BF₃ as catalyst), 250°, 8, F₂CHCF₂CF₃ (scrubbed with 40% aqueous KOH), 56, - (a run at 180° without catalyst gave only F₂CHCF₂COF); cyclobutane-1,1-dicarboxylic acid, 0.28, 2.32, 150°, 6, (CF₃)₂C.CH₂.CH₂.CH₂, 43, 68-9°; CF₂.CF₂.CF₂.CH₂CH₂CO₂H, 0.08, 0.30, 160°, 16, CF₂.CF₂.CF₂.CHCH₂CF₃, 51, 67°; CH₂:CHCO₂H, 0.75, 2.00, 130°, 8, CH₂:CHCF₃ (scrubbed with 20 % aqueous KOH), 45, - 26°; CH₂:CMeCO₂H, 0.75, 2.00, 130°, 8, CH₂:C(CF₃)Me, 54, 6°; trans-(:CHCO₂H)₂, 0.55, 2.78, 130°, 9, trans-(:CHCF₃)₂, 95 (scrubbed with 20% aqueous KOH), 6°; (:CHCH₂CO₂H)₂, 0.10, 0.55, 130°, 10, (:CHCH₂CF₃)₂, 58, 90-1° (n₂₅D 1.3131); CH₂:C(CO₂H)CH₂CO₂H, 0.62, 2.80, 160°, 10, CH₂:C(CF₃)CH₂CF₃, 26, 47-9° [and 41% CH₂:C(COF)CH₂CF₃, b. 90-5°]; HO₂CCH₂.CH₂.CMe.CCO₂H, 0.149, 0.89, 120°, 4, CF₃CH₂.CH₂.CMe.CCF₃, 31, 95-6° (and 30% CF₃CH₂.CH₂.CMe:-CCOF, b. 160-1°); HC.tplbond.CCO₂H, 2.00, 2.10, 30-55°, 3, CH.tplbond.CCOF, 28, 22-3°; CH.tplbond.CCO₂H, 0.27, 0.78, 120°, 3, CH.tplbond.CCF₃ (scrubbed with buffer of pH 8.5 containing 450 g. NaH₂PO₄.H₂O and 220 g. KOH in 4 l. H₂O), 60, -; (.tplbond.CCO₂H)₂ (diluted with 60 g. methylcyclohexane), 0.395, 1.67, 70; 6, (.tplbond.CCOF)₂, 51, 40-5°; (.tplbond.CCO₂H)₂, 0.125, 0.75 (and 0.016 mole TiF₄ as catalyst), 170°, 8, (.tplbond.CCF₃)₂, 80, -; O(CH₂CO₂H)₂, 0.50, 3.00, 130°, 7, O(CH₂CF₃)₂, 35, 58-9° (and O.CH₂.CF₂.O.CF₂.CH₂, 14%, b. 91°, n₂₅D 1.3262); EtO₂C(CH₂)₄CO₂H, 0.77, 2.00, 130°, 7, EtO₂C(CH₂)₄CF₃, 14, 57-9°/11 mm. (n₂₅D 1.3725) [and 13% HO₂C(CH₂)₄CF₃, 110-11.5°/17 mm., 37-8.5°]; HOCH₂CO₂H, 0.75, 3.00, 160° 5, FCH₂CF₃ (scrubbed with 20% aqueous KOH), 48, -26.5° (and 18% FCH₂COF, b. 51°); HO₂CCH₂SO₃H, 0.2, 0.69, 180°, 6, CF₃CH₂SO₂F, 41, 105-7°; HO₂C(CH₂)₁₀SO₃H, 0.083, 0.41, 130°, 8, CF₃(CH₂)₁₀SO₂F, 42, 100-10°/0.10 mm.; HO₂C(CH₂)₆CH(CO₂H)SO₃H, 0.195, 1.61, 150°, 8, CF₃(CH₂)₆CH(CF₃)SO₂F, 33, 62-4°/0.15; BzOH, 0.25, 0.50, 120°, 6, PhCF₃, 22, 100-1° (n₂₅D 1.4133) (and 41% BzF, b. 155-6°); BzCO₂H, 0.125, 0.51, 100°, 6, PhCF₃, 13, 45-55°/100 mm. (and 59% BzF, b₁₀₀ 92-4°); o-C₆H₄(CO₂H)₂, 0.10, 0.55, 120°, 6,

o-C6H4(CF3)2, 43, 140-4° (and o-CF3C6H4COF, 23%, b. 175-8°);
p-C6H4(CO2H)2, 0.10, 0.60, 120°, 6, p-C6H4(CF3)2, 76,
113-15° (n25D 1.3767) (and 3% p-CF3C6H4COF, b. 156°);
1,2,4,5-C6H2(CO2H)4, 0.07, 0.83, 150°, 6, 1,2,4,5-C6H2(CF3)4, 77, -
(m. 73-4°); p-MeO2CC6H4CO2H, 0.44, 1.33, 130°, 7,
p-MeO2CC6H4COF, 63, 120-1°/13 mm. (m. 69-70.5°);
p-O2NC6-H4CO2H, 0.67, 2.12, 130°, 7, p-O2NC6H4CF3, 72, - (m.
41-3°); 4,1,3-ClC6H3(CO2H)2, 0.20, 1.20, 150°, 8,
4,1,3-ClC6H3(CF3)2, 62, 147° (n25D 1.4130); piperazine-2,3,5,6-
tetracarboxylic acid, 0.035, 0.42, 150°, 6, 2,3,5,6-
tetrakis(trifluoromethyl)piperazine, 20, 129°: BzF, 0.145, 0.30
(and 0.05 mole HF as catalyst), 120°, 6, PhCF3, 41, 100°
(n24.9D 1.4124); BzCl, 0.20, 0.80, 150°, 8, BzF, 51, 149°;
BzCl, 0.20, 0.50 (and 0.25 mole HF), 120°, 6, m-ClC6H4CF3, 25,
138-9° (n25D 1.4459); Ac2O, 0.30, 0.20, 300°, 10, MeCF3
(scrubbed with 10% aqueous NaOH), 50, -; maleic anhydride, 0.30, 0.60,
150°, 13, maleic acid difluoride, 71, 100-5°;
dichloromaleic anhydride, 0.20, 0.47, 300°, 10, O.CF2.CCl:CCl.CF2,
46, 73-4°; phthalic anhydride, 0.20, 0.40, 180°, 18,
o-C6H4(COF)2, 93, - (m. 40°); phthalic anhydride, 0.40, 1.60,
350°, 11, o-C6H4(CF3)2, 45, 143°; BzONa (in 100 cc.
cyclohexane), 0.25, 0.50, 120°, 6, BzF, 48, 152-5°;
PhC.tplbond.CCO2Na (in 100 cc. cyclohexane), 0.475, 0.52, 45°, 6,
PhC.tplbond.CCOF, 71, 52-3°/2 mm.; BzOMe, 0.30, 0.60, 300°,
6, 55% PhCF3, 98° (and a trace of BzF, b. 151°);
p-C6H4(CO2Me)2, 0.10, 0.60 (and 0.03 mole BF3), 130°, 8,
p-C6H4(CF3)2, 16, 113-16° [and 26% p-CF3C6H4COF, b. 154-8°;
4% p-C6H4(COF)2, m. 122-4°, and a high yield of MeF]; HCO2Me, 0.10,
32 (and 0.05 mole HF), 200°, 6, -, - (high yields of MeF and CHF3
and a low yield of F2CHOMe); MeO2CC:CH.CF2.CF2, 0.20, 0.60 (and 0.03 mole
BF3), 140°, 16, CF3C:CH.CF2.CF2, 10, 42-3°; BzNH2, 0.20,
0.41, 150°, 8, PhCF3, 13, 36-8°/64 mm. (n25D 1.4150);
BzNHMe, 0.25, 0.50 (and 0.05 mole BF3), 60°, 4, BzF, 48,
90-4°/107°; BzNMe2, 0.25, 0.50, 130°, 6, PhCF2NMe2,
17, 70-1°/15 mm. (and 1.3% BzF, b13 50-5°); phthalimide,
0.20, 0.69 (and 0.045 mole BF3), 100°, 10, o-CF3C6H4COF, 58,
176-8°; AcH, 0.60, 0.75, 50°, 14, MeCHF2, 35, above
-34°; C6H13CHO, 0.25, 0.37, 60°, 8, C6H13CHF2,
43, 118-19° (n25D 1.3688); α -polyoxymethylene, 2.33, 2.30,
150°, 6, CH2F2, 59, -51-5° [and O(CH2F)2, 21%, b.
32-4°]; H(CF2)4CHO, 0.25, 0.28, 100°, 10, F2CH(CF2)3CHF2,
55, 68-70°; BzH, 0.30, 0.60, 150°, 6, PhCHF2, 81,
130-5° (a similar run but with 0.30 mole SF4 gave no distillable
product); p-C6H4(CHO)2, 0.15, 1.00, 150°, 8, p-C6H4(CHF2)2, 88,
54°/20 mm; Me2CO, 0.60, 0.67, 110°, 16, Me2CF2, 60, -10 to
-5°; cyclohexanone, 0.40, 0.41, 39°, 13,
1,1-difluorocyclohexane, 31, 98-9° (n25D 1.3890); BzPh, 0.25, 0.50
(and 0.05 mole HF), 180°, 6, Ph2CF2, 97, 114-15°/7.5 mm.
(n25D 1.5351); BzCF3, 0.075, 0.22, 100°, 8, PhC2F5, 65,
115-16°; Bz2, 0.125, 0.50, 180°, 5, (PhCF2)₂, 34, - (m.
122-3°); trioxoindan-H₂O, 0.254, 1.55, 120°, 8,
o-C6H4.CF2.CF2.CF2, 25, 34°/4.5 mm. (b70 92-3°);
(EtO2CCH2)₂CO, 0.25, 0.50, 80°, 6, (EtO2CCH2)₂CF₂, 29,
63-5°/2 mm. (n25D 1.4038); Ac(CH2)2CO2Et, 0.42, 0.48 (and 0.028
mole H₂O), 95°, 10, MeCF2(CH2)2CO2Et, 16, 70-2°/27 mm. (n25D
1.3798); BzCH:CHCO2Me, 0.23, 0.48, 160°, 10, PhCF2CH:CHCO2Me, 25,
102-3°/4.5 mm., (n25D 1.4861); p-benzoquinone, 0.20, 0.35 (and 0.35
mole HF), 200°, 4, 1,2,4-C6H3F3, 30, 86.5°; chloranil,
0.14, 0.42 (and 0.15 mole HF), 270°, 2.5, CF2.CCl:CCl.CF2.CCl:CCl,
75, 183-8° (m. 45.5-6.5°) (and 2% CO.CCl:CCl.CF2.CCl:CCl, m.
104-7°); 2,5-dihydroxy-p-benzoquinone, 0.10, 0.55 (and 0.10 mole
HF), 60°, 8, CF2.CF2.CH2.CF2.CF:CH, 40, 88-8.5°;
2-hydroxy-1,4-naphthoquinone, 0.10, 0.50 (and 0.10 mole H₂O), 140°,
1.5, 1,1,2,2,4,4-hexafluoro-1,2,3,4-tetrahydronaphthalene, 36,

91-5°/30 mm.; anthraquinone, 0.059, 0.28, (and 0.05 mole HF), 225°, 8, 9,9,10,10-tetrafluoroanthracene, 78, - (m. 122-2.5°); tropolone (I), 0.02 (and 5 cc. C₆H₆), 0.065, 60°, 10, 2-fluorotropone, 28, - (m. 74-5°); 3,5,7-tri-Br derivative of I, 0.0033 (and 5 cc. C₆H₆), 0.02, 60°, 8, 2-fluoro-3,5,7-tribromotropone, 57, - (m. 134-42°). CO₂ (0.11 mole) and 0.20 mole SF₄ heated 2 hrs. at 500° yielded 80% CF₄ and 10% COF₂. COCl₂ (0.10 mole) and 0.30 mole SF₄ in the presence of 0.026 mole TiF₄ heated 4 hrs. at 250° gave 90% CF₄ and 9% COF₂. CO (0.2 mole), 0.50 mole SF₄, and 0.5 mole HF heated 7 hrs. at 250° yielded 95% CF₄. A mixture of 0.75 mole CO and 0.22 mole SOF₂ heated 2 hrs. at 500° gave 70% CO, 13% COS, 6% COF₂, and 11% CO₂.

AN 1960:74178 HCAPLUS <<LOGINID::20071017>>
 DN 54:74178
 OREF 54:14091f-i,14092a-i,14093a-g
 TI The chemistry of sulfur tetrafluoride. II. The fluorination of organic carbonyl compounds
 AU Hasek, W. R.; Smith, W. C.; Engelhardt, V. A.
 CS E. I. du Pont de Nemours & Co., Wilmington, DE
 SO Journal of the American Chemical Society (1960), 82, 543-51
 CODEN: JACSAT; ISSN: 0002-7863
 DT Journal
 LA Unavailable
 IT 702-99-8P, Benzylamine, α,α -difluoro-N,N-dimethyl-
 RL: PREP (Preparation)
 (preparation of)
 RN 702-99-8 HCAPLUS
 CN Benzenemethanamine, α,α -difluoro-N,N-dimethyl- (CA INDEX NAME)

Ph-CF₂-NMe₂